

ROOSEVELT (Transferred to NPS 1947)

NARRATIVE REPORTS

JANUARY-DECEMBER 1947

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ROUTING SLIP

DIVISION OF WILDLIFE REFUGES

DATE: 5-20 1947

MR. SALYER  
MR. KRUEGER WK 9/2  
MR. DUMONT PAD 6/2  
MISS BAUM

SECTION OF HABITAT IMPROVEMENT:

Mr. Griffith PEG 5-20  
Dr. Bourn WSB 5-26  
Miss Cook JWC 6-18

SECTION OF OPERATIONS:

Mr. Hall J. G. B.  
Mr. Regan AGC

SECTION OF LAND MANAGEMENT:

Mr. Kent JK 7-28  
Mr. Ackerknecht LEA 7-24

SECTION OF STRUCTURES:

Mr. Taylor WV 7/18

STENOGRAPHERS:

REMARKS:

ROOSEVELT REFUGE

January - April 1947

Return to: \_\_\_\_\_



Refuge Manager, Roosevelt Refuge

May 19, 1947

Regional Refuge Supervisor, Minneapolis, Minnesota

January-April Narrative Report - Roosevelt Refuge

In reviewing your Narrative Report for the period January-April 1947, it is noted that the extra copy of the NR forms was not included in the original copy of this report. Kindly arrange to furnish this office with an extra copy of your NR forms so that they may be transmitted to the Central Office.

F. C. Gillett

GVP:lva



May 19, 1947

Refuge Manager, Roosevelt Refuge

National Refuge Supervisor, Minneapolis, Minnesota

January-April Narrative Report - Roosevelt Refuge

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F. C. Gillett



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# THEODORE ROOSEVELT NATIONAL WILDLIFE REFUGE

## NARRATIVE REPORT

January 1 to April 1  
1947

### I. GENERAL

Weather Conditions - Our winter, while probably not comparing to "The Big Blue Snow" of grandpappys day, will be remembered in some present day vernacular form as a real winter. From October 1, 1946 to April 30, 1947 we had a measureable snowfall of 41.32 inches. This 41 inch fall far exceeds the fifty year average of 18.1 inches.

True blizzard conditions were rare and man wasn't too greatly inconvenienced by the prolonged and heavy winter. It was rather difficult to get just where you wanted to when you wanted to at times; was rather hard on the coal bill; and made papa the sole judge of easter finery when 10 inches of snow fell easter eve and thus precluded any easter parade participation on the part of the women folks.

Wildlife and domestic livestock, like man, were inconvenienced but apparently didn't suffer from the rigors of the winter.

Following in tabular form is presented the weather statistics from our Medora cooperator:-

	: Snowfall :		: Precipitation:			: Max. Temp. :		: Min. Temp.	
Month	: 1946:	1947 :	1946 :	1947 :		: 1946 :	1947 :	1946:	1947
Jan.	: 75:	6.00:	—	: .16 :		: 56 :	47 :	-15 :	-28
Feb.	: 4.25:	1.30:	.20	: - :		: 57 :	53 :	-24 :	-19
March	: 1.30:	5.25:	.77	: .12 :		: 82 :	59 :	12 :	-20
April	: - :	10.00:	.11	: 1.68 :		: 84 :	87 :	15 :	20
Total	: 6.30:	22.55:	1.08	: 1.96 :	Extremes:	: 84 :	87 :	-24 :	-28

Water Conditions - The so called Little Missouri River looked pretty darn big to us a couple of times this report period. The river ice was unsafe to travel by car during most of January. We did several rescue jobs on cars and trucks through the ice that month. A partial thaw the first two days of February followed by a hard freeze made the river the best roadway it was all winter. On the 13th of February a general thaw set in and runoff started building up on the river. On the 16th the river ice went out at 3:15pm. Not too warm weather didn't put her in a real flow condition she was just a slow moving mass of ice from bank to bank. By the 21st the temperature had again dropped to the point where the river ice stopped flowing and she froze over from bank to bank and apparently from top to bottom.

The first day of spring, March 21st, saw the temperature jump up to the 70's and snow disappearing from the land. We made pretty close checks on the river on the 22nd and 23rd. At 10:30pm on the 23rd we were notified by phone that the river ice had broken 30 miles to the south of us. A pretty close night vigil was then kept on the river pending possible high water. At 2:45am on March 24th the vigil ended in a rush to get families to high ground because the darn river seemingly exploded and was sending ice and water down on our humble homes from all directions. Anybody caring to read the more gruesome details of our flood are referred to our report on same. The river continued to run almost bank full during all of April, gradually dropping toward its normal April flow during the last week in April.

Fires - The bountiful snowfall and precipitation would seemingly preclude any early spring fire hazard. We have had no fires on the refuge during the report period but two reported grass fires on the NP railroad right-of-way on April 19 were enough warning for us to place our fire fighting equipment in a 'Ready' status.

## II. WILDLIFE

### Migratory Birds - (See NR-1 and NR-1A)

Populations and Behavior - Waterfowl - as we have not been present during previous spring flights we have no basis for comparison. Our waterfowl observations are still limited to a few stragglers that drop in weariness on the Little Missouri River or, as in the case this spring, rest and feed for a day on the myriad shallow pot holes left in the coulees and on the prairie bench by spring run-off. Seemingly to add insult to injury our first waterfowl records were made on the morning of March 24th when our entire headquarters area resembled Little America. Shorebirds - other than the spring flight of sandhill cranes from April 9 to 18 and the usual number of killdeer our shorebird records are confined to the chance observation of a pair of avocets on a river sandbar.

Food and Cover - We just don't have any inducement to offer waterfowl.

### Upland Game Birds - (See NR-2)

Populations and Behavior - prairie sharp-tailed grouse is the only upland game species seen daily and in numbers. We rather surmise, from observations in the field, that the winter wasn't easy on them and there was considerable predation on the species by coyotes. When mating commenced and whether it has ended we can not definitely state. We can report that on April 25 at 4:40pm the manager witnessed a twelve minute dancing show by a lone cock.



Sight observations of ring-neck pheasants at headquarters ended on January 13. On and since April 20, although unobserved, the raucous call of a cock has been heard almost daily in the headquarters valley.

Observations on Hungarian partridges for the period are limited to the sight observation of a lone pair at the entrance to the Watford Division of the refuge on April 25.

Food and Cover - Due to pressure of other work and the difficulty in getting over any great portion of the refuge, due to snow and treacherous roads, very little field observation was possible. The few times we were able to get around it was noted that the grouse were bunched in coveys of 5 to 200 birds along the draws and rim breaks of the prairie bench. Cover was adequate but the grouse really had to get down and scratch for food most of the period. Their food, this time of the year, is on the ground and the observer could find them working the snow blow-off bare spots for any available weed, grass or berry seed available.

Bird Records General - We are appending to this report a list of the recorded bird species by the manager. The list is made from sight observations and we have indicated the months of the year the species has been recorded on the refuge. Our more complete bird records of arrival, nesting, numerical status and general migration data will be placed in the refuge file that is to be stored at Lake Ilo Refuge.

Big Game Animals - The reader is referred to our report of aerial survey of the refuge as submitted March 6, 1947.

Populations and Behavior - Again, on several field excursions, this office has wished for a camera to photographically record some valuable and interesting wildlife episodes. A motion picture camera would have been of value in recording one episode that we have related once in our itinerary but would like to relate again for those whom missed it:-

February 19, 1947 - About 4:00pm this office was contacted by a Mr. Kelso and Everetts (local residents), interested in obtaining some fire wood. We directed them to the cottonwood grove behind headquarters to look the situation over. In a few minutes they were back in the office on the double asking if the manager had a rifle that he could use in scaring a doe deer off the river pack ice before she committed suicide.

At 4:10pm the manager, Mr. Thomas and the wood customers went down to the river, the manager armed with his pistol. K&E told their story while we were all returning to the river. While looking over the wood situation they saw a doe and her yearling leave the woods, go down to the river and attempt to cross the river on the pack ice (the river was two feet out of its banks and jammed with flowing pack ice). As the deer started across, the yearling following



the doe, both were taking plunges between the cakes but would manage to struggle back up on to another cake of ice. It finally became too much for the yearling and it went down not to come up again. The doe made it across and stood looking back for her baby. When the four of us returned to the river the doe, now on the far side of the river, could be heard bleating loud enough to be heard above the noise of the grinding ice pack and to all intent seemed bent in going back into the river that had just claimed her yearling. Rather than use the pistol we four men yelled at the top of our lungs and flailed our arms with the desired effect. The doe went up over the steep north bank, much like a scarred rabbit, and headed for the bench plateau above. We saw her make it over the rim of the plateau.

We four men were standing there shooting the bull and watching the pack ice. The manager happened to look up to the rim where the doe had disappeared and what a sight he beheld. Here coming down over the rim was our white-tail doe with one coyote affixed to the ham of her left hind leg in a death like grip and another coyote trying to make a slash at her throat. The doe dragged the one coyote and fought the other until she reached the last 20' drop to the river. The coyotes were apparently oblivious to our presence across the river. The manager put the pistol in action and though the distance was some 250' the first shot put the throat slashing coyote into a high tailed run and the second shot made the ham stringer release his hold and take for the hills. The doe once rid of her foes slid down the 20' drop into the river - hit in the water a swimming and managed to get up on a large ice cake. She stood there bleeding rather profusely from her torn left hind leg, looking first at us and then back to where her mortal foes had been. She rode the cake of ice for some 100' down river and then swam ashore on the far side of the river from us. Rather than go up on the plateau again she proceeded on down the shore line to a point about  $\frac{1}{4}$  mile below we observers where the river makes a bend and is approximately 400 feet in width. Here a safe distance from her foes she started across the river. She made it about half way across and then she disappeared beneath the ice cakes and apparently drowned as we hurried down along the river to do what we could for her but didn't see her again.

We knew we were losing a few deer to coyotes once in awhile but now we are wondering about this new type of mortality loss we have discovered. We wonder just how many deer meet this drowning fate during the river break-up period. In this case we had two mortalities from drowning in less than an hours time. During the one to five times that the river partially breaks and fully breaks up each season we wonder how many deer are lost?

After posing this question of deer mortality during river break-up we decided to do a little local research on the subject. In talking to rancher river residents we became impressed with the fact that the drowning in the pack ice we recorded is not at all uncommon. Practically every river rancher talked to has seen

it happen each year and on several occasions each year in many instances. Several even reported saving a few deer from such fate by roping them and dragging them ashore. During the break-up of the Big Missouri River, the last week in March this year, a rather reliable source reported to us that in two hours spent watching the break-up in the vicinity of Elbowwoods he recorded 37 deer headed ~~down~~ river on the ice pack. Of these 37 deer he personally saw 14 drown in their attempts to make shore.

It seems to the writer that this loss could take quite alarming proportions each year and should be considered by wildlife technicians when they are contemplating restocking of river bottom habitats.

We are of the opinion that the majority of the deer lost in this manner are white-tailed deer. We doubt whether many mule deer are lost in this manner.

During our field observations we have endeavored to determine when the bucks dropped their antlers. Our records indicate that they started dropping their antlers as early as December 15; the majority had dropped their antlers by March 1; and our last recorded antlered buck was of a mule deer buck on March 21 with one antler still remaining on.

We have also endeavored to record fawning dates but have not been too successful. The first two weeks in April we noted many "heavy" does in both the mule deer and white-tailed deer. Yearlings had been deserted by their mothers and it is not uncommon to see 2 to 5 yearlings running together. On April 25 the first fawn track was noted but to date we have not seen a fawn.

On April 25 a buck antelope was observed on the north rim of the Watford Division of the refuge.

Food and Cover - Both species of deer continued browsing until the second week in April. Since then our observations have indicated the species both browsing and grassing on new sprouted grasses.

Cover remains adequate for the mule deer. The flood waters and ice action of our break-up this spring has had a marked effect on our white-tail deer habitat. Some of the cottonwood and shrub covered bottoms have been almost completely denuded and buried in a heavy deposit of river silt. White-tail deer remaining have deserted these bottoms, which we are sure were their fawning grounds, and are to be found concentrated in the brush covered coulees leading up from the bottoms.



Diseases and Predation - No observed diseases. Our relating of the attempted coyote kill of a doe white-tailed deer on February 19, we feel is not uncommon.

Fur Animals, Predators, Rodents and Other Mammals - (See NR-4)

Our pair of beaver remained active at headquarters until February 16th when the river became bank full. They were then either drowned or left for parts unknown.

We still see some bob-cat sign around, have heard one scream but to date have not actually seen one. Coyotes we can not say the same for. They are definitely heard at all hours of the day and night, often seen and are apparently destined to govern the wildlife unbalance of this area unless our successors have a definite change in their administrative policy. Yes, there is a real coyote problem here and if very drastic measures are not taken to correct it both wildlife and domestic livestock interests are going to suffer severely. With the prairie dogs in the ground for the long winter we had and the rodent population of mice and rabbits at a very low point there were only three sources of food available for the voracious coyote packs and these were deer, grouse and domestic livestock.

Porcupines were noted more frequently this period than anytime since we have been on the refuge. Their feeding activities could be noted in most all of the cottonwood bottoms and even in the green ash trees in the coulees leading up from the bottoms. Nature put a control check on them this spring in the form of the flood. We have found two dead by drowning porkys and imagine quite a few met the same fate.

Predacious Birds, Crows and Magpies - (See NR-1A) - the magpie is a permanent resident with us. First indications of magpie nesting were on April 20. Crows started arriving the last of March and are common on the refuge now. Both crows and magpies are finding plenty of carrion food in the form of drowned wildlife, fish, cattle and horses along the river bottoms.

Fish - We knew that the Little Missouri River had good runs of catfish occasionally but our flood revealed to us a fish species that is even more common than the catfish judging from the number of dead carp found along the river bottoms. The carp range in size from  $\frac{1}{2}$  to 3 pounds.

### III. REFUGE DEVELOPMENT MAINTENANCE

Physical Development - Physical work on the refuge this report period was confined to necessary and routine maintenance that could be carried out by Mr. Thomas working alone as the manager was involved in an attempt to draw up some workable master plans for the refuge. Job accomplishments were as follows:-

-Loaded, hauled and placed 30 cubic yards of scoria in our headquarters service area.

-Moved former paint house to new location and made interior alterations to convert it into a combination paint and oil house.

-Moved six miscellaneous tar paper shacks out of the headquarters plot and placed them in hiding behind the CCC lumber storage shed.

-Replaced old light plant motor with a salvaged 1933 Chevrolet motor after old motor threw a rod through the block.

-Installed newly purchased light plant.

-Inventoried all building materials on hand.

-Loaded out three good sized truck loads of ship lap and dimensional lumber. One to Lacreek and two to Lake Ilo.

-Spent 30 hours blading roads.

-Innumerable hours spent cleaning mud out of buildings after flood.

-Placing fire equipment in a "Ready" condition.

-Mechanical maintenance as required including; servicing of equipment; replacement of bulldozer hydraulic system; replacement of drive pinion in tractor (and what a collection of washers, cotter keys and nails we found in the bottom of the drive case when we cleaned it out - all apparently from the last time it was dug into); innumerable hours flushing and cleaning motors, transmissions and differentials on three of the four trucks that were under water in the flood.

#### IV. ECONOMIC USE OF REFUGE

Fur Harvest - Despite the fact that we had out a permit to trap coyote on a trapper take all basis we drew a blank on the take. The permittee was highly recommended by local peoples and representatives of the Predator Animal Control Division but he still drew a blank.

Timber Removal - Our demand for cord wood was small during the period and we disposed of only 10 cords at 60¢ per cord.

#### VI. PUBLIC RELATIONS

Recreational Uses - Public visitation of the refuge has been light during the period due to almost impassable roads most of the period. The spring like thaw of February 13th to 16th put a few visitors over our scenic drive. Again on the weekend following our flood the more curious came in to see the damage. Since April 15 daily visitation by the public is becoming more frequent.

Refuge Visitors - A few official visitors have found their way to our door:-

Name	Title	Representing	Date	Hrs. on Refuge
Mr. Dinkins	Labor-Patrolman	Lake Ilo Refuge	2/24	2



Name	Title	Representing	Date	Hrs. on Refuge
E. Wellein	Pilot-Biologist	Service	3/4-5	14
F. Egge	Construction	Lacreek Refuge	3/17	2
T. Kibbe	Ass't. Reg. Dir.	Service	3/18	$\frac{1}{2}$
A. Hamm	Pred. Con. Agent	Service	3/18	$\frac{1}{2}$
Mr. Tracy	Secretary-Field	Greater N.D.A.	4/29	1
F. Gillett	Reg. Ref. Super.	Service	4/30	8
			5/1	4

Refuge Participation - On February 17, the manager was invited to attend an open meeting of the Medora Commercial Club relative to congressman Lempke's bill H.R. 731. A full report of the meeting has been submitted.

On March 7, at the request of the secretary of the Dickinson Chamber of Commerce the manager attended a meeting held in Dickinson for the purpose of refuting some malicious stories that were being circulated about the refuge being closed to the public.

#### VII. OTHER ITEMS

The writer has endeavored to compile this narrative in the spirit it should be written and tried to refrain from sounding like the proverbial "dying duck in a thunder storm" but it has been difficult. This is the swan song of the Theodore Roosevelt National Wildlife Refuge.

As this narrative was being drafted we have read and reread our first narrative that we submitted for this refuge on September 6, 1946. That crystal ball of the writers sure was fumbled and busted all to hell.

Wildlife conservation being just a bit more than a salary check to the writer and being kind of a soft hearted guy I am probably the only person that has shed a wet tear over the loss of this area to the wildlife refuge system. At no time, I am confident, have I over-envisioned the possibilities and potentialities of this areas as a wildlife paradise.

As I set here I can't help but wonder what Teddy Roosevelt would think about this furor that has been raised in his name. I can't help but think, after picturing the man from his outdoor writings, that this memorial park and hunk of statuary in his name is just so much trite power politics and belly-wash on the part of a few individuals. Teddy didn't come to these Badlands for their scenic wonders and to ranch as has been purported by our adversaries. He came here because it represented to him a fast receding type of frontier land that was still a big game paradise. He came here to regain health and partake of some then still possible mixed bag big game hunting.

Teddy was fortunate that he was in here during the waning years of such game hunting. Four species of big game, namely bison, sheep, grizzly bear and elk, that fell to his guns have now been extirpated from the area. The land and flora hasn't changed a great deal since Teddy's day and we are confident that under adequate administration we could once again have all of those extirpated species back in their own "diggins".

The area is a biological paradise and a challenge to any wildlife manager. There are those whom will say that it can be administered as a Park and still have the big game. To them I say it wont work. The area if left in its entirety as a refuge management unit could have become the best big game refuge in these United States and provided many more benefits for the sight-seeing public. Chopped up now and managed from a recreational standpoint it can provide some second rate scenery for human consumption and become an unbalanced haven for a few deer, coyotes, prairie dogs and cows.

Gosh almighty I sound sour and as though I am carrying a chip on my shoulder. No, I shall not go out of here carrying a chip on my shoulder, I will go out a little wiser to the fact that an unscrupulous individual catering to the wishes of a minority group that hoped to feather their own nest can make a farce out of serving the people in the best interest of all the peoples.

My only wish is that I had some power of communication with the birds and beasts of these Badlands and could in confidence say, "Be good, kids, the Fish and Wildlife Service will be back".

Respectfully submitted,

Eugene E. Crawford

Eugene E. Crawford  
Refuge Manager

Date submitted:- May 7, 1947

Approved by Regional Office

SA Janner  
REGIONAL DIRECTOR

MAY 13 1947



# WATERFOWL

Refuge Theo. Roosevelt N.W. Refuge Months of January to May 1947

(1) Species  Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose									
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	2    1 5   20   3	3/24    3/24 4/25  4/25  4/19	50    10 5  20  3	4/1    4/15 4/25  4/25  4/19	      5  3	      4/25  4/19			50    10 5  20  3
IV. <u>Coot:</u>	5	5/1	5	5/1	5/	5/1			5

## SUMMARIES

Total Production:

Geese \_\_\_\_\_

Ducks \_\_\_\_\_

Coots \_\_\_\_\_

Total waterfowl usage during period 93Peak waterfowl numbers 50Areas used by concentrations Little Missouri River  
and pot holes along prairie rim.

Principal nesting areas this season \_\_\_\_\_

Reported by Eugene E. Crawford

## INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First Seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentration: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.



## Theo. Roosevelt N.W. Refuge

January to May 1947

Shorebirds

	First Seen	Last Seen	
Sandhill Crane	17 4/9	700 4/18	937
Killdeer	1 3/26		150
Avocet	2 4/21	2 4/21	2
Herring Gull	1 4/18	1 4/18	1
Franklin's Gull	3 4/25		10

Western Mourning Dove	1 4/7		300
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Montana Horned Owl	Permanent Resident		
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Turkey Vulture	2 5/1		25
Cooper's Hawk	1 4/16		2
Northern Red-shouldered Hawk	3 4/25		10
Ferruginous Rough-leg Hawk	7 4/25		15
Golden Eagle		3 4/9	5
Northern Bald Eagle		6 4/9	10
Marsh Hawk	1 3/28		40
Prairie Falcon	1 4/17		6
Duck Hawk	1 4/20	1 4/25	1
Eastern Sparrowhawk	3 4/21		60

American magpie	Permanent Resident		
Eastern Crow	2 3/28		200

3-1752  
Form NR-2  
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Theo. Roosevelt N.W. Refuge

Months of January to May, 1947

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird  Number broods obs'v'd. Estimated Total	Percentage	Hunting  For Re- stocking  For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Prairie sharp- tailed grouse					500	
Ring-necked pheasant					5	
Hungarian partridge					5	



# INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.\*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

\* Only columns applicable to the period covered should be used.



3-1754  
Form NR-4  
(June 1945)

# SMALL MAMMALS

Refuge Theo. Roosevelt N.W. Refuge

Year ending April 30, 1947

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator * Control	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Coyote								T-2887	0	0				300
Bob-cat														10
Prairie dog														25000
Beaver														3
Porcupine														75

\* List removals by Predator Animal Hunter

\* List removals by Predator Animal Hunter

REMARKS:

Reported by Eugene E. Crawford



# INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
- (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
- (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.

REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.



CHECK LIST OF BIRDS OF THE THEODORE ROOSEVELT NATIONAL  
WILDLIFE REFUGE

As observed and recorded by:- Eugene E. Crawford

SPECIES COMMON NAME	APPEARANCE MONTHS OF THE YEAR											
	J	F	M	A	M	J	J	A	S	O	N	D
GREAT BLUE HERON	:	:	:	:	:	:	X	X	X	:	:	:
COMMON MALLARD	:	:	X	X	X	:	:	:	:	X	:	:
AMERICAN PINTAIL	:	:	X	X	X	:	:	:	X	X	:	:
BLUE-WINGED TEAL	:	:	:	X	:	:	:	:	:	X	:	:
SHOVELLER	:	:	:	X	X	:	:	:	:	:	:	:
CANVAS-BACK	:	:	:	X	:	:	:	:	:	:	:	:
TURKEY VULTURE	:	:	:	:	X	X	X	X	X	X	:	:
COOPER'S HAWK	:	:	:	X	:	:	:	:	X	:	:	:
EASTERN RED-TAILED HAWK	:	:	:	:	:	:	X	X	X	:	:	:
KRIDER'S HAWK	:	:	:	:	:	X	:	:	:	:	:	:
NORTHERN RED-SHOULDERED HK	:	:	:	X	X	:	:	:	X	X	:	:
SWAINSON'S HAWK	:	:	:	:	:	:	:	X	:	:	:	:
FERRUGINOUS ROUGH-LEGGED HK	:	:	:	X	:	:	:	X	:	:	:	:
GOLDEN EAGLE	X	X	X	X	:	:	:	:	:	X	X	X
NORTHERN BALD EAGLE	:	:	X	X	:	:	:	:	:	:	X	:
MARSH HAWK	:	:	X	X	X	X	X	X	X	X	X	:
PRAIRIE FALCON	:	:	:	X	X	X	X	X	X	:	:	:
DUCK HAWK	:	:	:	X	:	:	:	:	:	:	:	:
EASTERN SPARROWHAWK	:	:	:	X	X	X	X	X	X	:	:	:
GREATER PRAIRIE CHICKEN	:	:	:	:	:	X	:	:	:	:	:	:
PRAIRIE SHARP-TAILED GROUSE	X	X	X	X	X	X	X	X	X	X	X	X
RING-NECKED PHEASANT	X	:	:	X	X	X	X	X	X	X	X	X
HUNGARIAN PARTRIDGE	:	:	:	X	X	:	:	:	:	X	:	:
SANDHILL CRANE	:	:	:	X	:	:	:	:	:	X	:	:
AMERICAN COOT	:	:	:	:	X	:	:	:	:	:	:	:
KILLDEER	:	:	X	X	X	X	X	X	X	X	:	:
UPLAND PLOVER	:	:	:	:	:	:	:	X	:	:	:	:
EASTERN SOLITARY SANDPIPER	:	:	:	:	:	:	X	:	:	:	:	:
AVOCET	:	:	:	X	:	:	:	:	:	:	:	:
BAIRD'S SANDPIPER	:	:	:	:	:	:	:	:	X	:	:	:
HERRING GULL	:	:	:	X	:	:	:	:	:	:	:	:
FRANKLIN'S GULL	:	:	:	X	X	:	:	:	:	:	:	:
WESTERN MOURNING DOVE	:	:	:	X	X	X	X	X	X	:	:	:
MONTANA HORNED OWL	X	X	X	X	X	X	X	X	X	X	X	X
SNOWY OWL	X	:	:	:	:	:	:	:	:	:	:	:
WESTERN BURROWING OWL	:	:	:	:	:	:	X	X	X	:	:	:
NORTHERN BARRED OWL	X	:	:	:	:	:	:	:	:	:	:	:
WESTERN NIGHTHAWK	:	:	:	:	:	X	X	X	X	:	:	:
EASTERN BELTED KINGFISHER	:	:	:	:	:	:	:	X	:	:	:	:
NORTHERN FLICKER	:	:	:	X	X	X	X	X	X	X	:	:
RED-HEADED WOODPECKER	:	:	:	:	:	X	X	X	:	:	:	:
NORTHERN HAIRY WOODPECKER	X	X	X	X	X	X	X	X	X	X	X	X
NORTHERN DOWNY WOODPECKER	X	X	X	X	X	X	X	X	X	X	X	X
BATCHELDER'S WOODPECKER	:	:	:	:	:	X	:	:	:	:	:	:
EASTERN KINGBIRD	:	:	:	:	X	X	X	X	X	:	:	:
ARKANSAS KINGBIRD	:	:	:	:	:	X	X	X	:	:	:	:



## CHECK LIST OF BIRDS (CONT.)

SPECIES COMMON NAME	APPEARANCE MONTHS OF YEAR											
	J	F	M	A	M	J	J	A	S	O	N	D
SAY'S PHOEBE	:	:	:	X	X	X	X	X	X	:	:	:
OLIVE-SIDED FLYCATCHER	:	:	:	X	:	:	:	:	:	:	:	:
PRAIRIE HORNED LARK	X	X	X	X	X	X	X	X	X	X	X	X
BANK SWALLOW	:	:	:	:	:	X	:	:	:	:	:	:
BARN SWALLOW	:	:	:	:	:	X	:	:	:	:	:	:
NORTHERN CLIFF SWALLOW	:	:	:	:	:	X	X	X	X	:	:	:
NORTHERN BLUE JAY	:	:	:	:	X	:	:	:	:	:	:	:
AMERICAN MAGPIE	X	X	X	X	X	X	X	X	X	X	X	X
EASTERN CROW	:	:	X	X	X	X	X	X	X	X	:	:
<i>long-tailed</i> BLACK-CAPPED CHICKADEE	X	X	X	X	X	X	X	X	X	X	X	X
COMMON ROCK WREN	:	:	:	:	:	X	X	X	X	:	:	:
CATBIRD	:	:	:	:	:	X	X	X	:	:	:	:
BROWN THRASHER	:	:	:	X	X	X	X	X	X	:	:	:
EASTERN ROBIN	X	X	X	X	X	X	X	X	X	X	:	:
EASTERN BLUEBIRD	:	:	:	:	:	X	X	X	X	X	:	:
MOUNTAIN BLUEBIRD	:	:	:	X	:	:	:	X	X	:	:	:
CEDAR WAXWING	X	:	X	:	:	:	:	:	:	:	:	X
NORTHERN SHRIKE	:	:	:	:	:	:	:	:	:	:	X	:
EASTERN YELLOW WARBLER	:	:	:	:	X	X	X	X	:	:	:	:
BLACK-THROATED BLUE WARBLER	:	:	:	:	:	X	:	:	:	:	:	:
AMERICAN REDSTART	:	:	:	:	X	X	X	:	:	:	:	:
LONG-TAILED CHAT	:	:	:	:	:	:	X	X	:	:	:	:
ENGLISH SPARROW	X	X	X	X	X	X	X	X	X	X	X	X
<i>Thick-billed</i> EASTERN MEADOWLARK	:	:	:	X	X	X	X	X	X	X	X	:
EASTERN RED-WINGED BLACKBD.	:	:	:	X	X	X	X	X	:	X	:	:
BULLOCK'S ORIOLE	:	:	:	:	X	X	X	:	:	:	:	:
BRONZED GRACKLE	:	:	:	X	X	X	X	X	X	:	:	:
NEVADA COWBIRD	:	:	:	X	X	X	X	X	X	:	:	:
SCARLET TANAGER	:	:	:	:	:	:	X	X	:	:	:	:
LAZULI BUNTING	:	:	:	:	:	X	X	X	:	:	:	:
DICKCISSEL	:	:	:	:	:	:	X	X	:	:	:	:
EASTERN EVENING GROSBEAK	:	:	X	:	:	:	:	:	:	:	X	:
EASTERN GOLDFINCH	:	:	:	:	:	X	X	X	X	:	:	:
STARLING	:	:	X	:	:	:	:	:	:	:	X	:
<i>Arctic?</i> RED-EYED TOWHEE	:	:	:	:	X	X	X	X	X	X	X	:
LARK BUNTING	:	:	:	:	X	X	X	X	:	:	:	:
WESTERN LARK SPARROW	:	:	:	X	X	X	X	X	X	X	:	:
SLATE-COLORED JUNCO	:	:	X	X	:	:	:	:	X	X	:	:
? EASTERN TREE SPARROW	X	X	X	X	:	:	:	:	:	X	X	X
CLAY-COLORED SPARROW	:	:	:	:	:	:	:	:	:	X	:	:
HARRIS'S SPARROW	:	:	:	X	:	:	:	:	:	X	:	:
WHITE-CROWNED SPARROW	:	:	:	:	:	:	:	:	:	X	:	:
DAKOTA SONG SPARROW	:	:	X	X	X	X	X	X	X	X	:	:



COMMON NAME	APPEARANCE MONTHS OF YEAR											
	J	F	M	A	M	J	J	A	S	O	N	D
SAVING PHOEBE	:	:	:	:	:	:	:	:	:	:	:	:
OLIVE-SIDED FLYCATCHER	:	:	:	:	:	:	:	:	:	:	:	:
PAINTED HORSE LARK	:	:	:	:	:	:	:	:	:	:	:	:
BANK SWALLOW	:	:	:	:	:	:	:	:	:	:	:	:
BARN SWALLOW	:	:	:	:	:	:	:	:	:	:	:	:
NORTHERN OLIVE SWALLOW	:	:	:	:	:	:	:	:	:	:	:	:
NORTHERN BLUE JAY	:	:	:	:	:	:	:	:	:	:	:	:
AMERICAN MAGNIFIC	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN CROW	:	:	:	:	:	:	:	:	:	:	:	:
BLACK-THROATED CHICKADEE	:	:	:	:	:	:	:	:	:	:	:	:
COMMON HOUSE WREN	:	:	:	:	:	:	:	:	:	:	:	:
CATBIRD	:	:	:	:	:	:	:	:	:	:	:	:
BLACK THRASHER	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN ROBIN	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN BLUEBIRD	:	:	:	:	:	:	:	:	:	:	:	:
MOUNTAIN BLUEBIRD	:	:	:	:	:	:	:	:	:	:	:	:
WOOD WARDEN	:	:	:	:	:	:	:	:	:	:	:	:
NORTHERN CHICKADEE	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN YELLOW WARBLER	:	:	:	:	:	:	:	:	:	:	:	:
BLACK-THROATED BLUE WARBLER	:	:	:	:	:	:	:	:	:	:	:	:
AMERICAN REDSTART	:	:	:	:	:	:	:	:	:	:	:	:
LONG-TAILED CHAT	:	:	:	:	:	:	:	:	:	:	:	:
ENGLISH SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN MOUNTAIN LARK	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN RED-WINGED BLACKBIRD	:	:	:	:	:	:	:	:	:	:	:	:
BULLOCK'S ORIOLE	:	:	:	:	:	:	:	:	:	:	:	:
BROWN GRACKLE	:	:	:	:	:	:	:	:	:	:	:	:
NEVADA COWBIRD	:	:	:	:	:	:	:	:	:	:	:	:
COOPER'S SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
LAUREL BURNING	:	:	:	:	:	:	:	:	:	:	:	:
DICKCISSER	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN EVENING GROSBEAK	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN GOLDFINCH	:	:	:	:	:	:	:	:	:	:	:	:
STARLING	:	:	:	:	:	:	:	:	:	:	:	:
RED-EYED VOWEE	:	:	:	:	:	:	:	:	:	:	:	:
LAUREL BURNING	:	:	:	:	:	:	:	:	:	:	:	:
WESTERN LARK SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
STATE-ORCHARD JUNCO	:	:	:	:	:	:	:	:	:	:	:	:
EASTERN TREE SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
CLAY-COLORED SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
HARRIS'S SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
WHITE-THROATED SPARROW	:	:	:	:	:	:	:	:	:	:	:	:
LAUREL SONG SPARROW	:	:	:	:	:	:	:	:	:	:	:	:

